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I. BIRDS FROM MINDORO AND SMALL ADJACENT ISLANDS

II. NOTES ON THREE RARE LUZON BIRDS

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No. 34.—OCTOBER, 1905

DEPARTMENT OF THE INTERIOR
BUREAU OF GOVERNMENT LABORATORIES

I. BIRDS FROM MINDORO AND SMALL ADJACENT ISLANDS

II. NOTES ON THREE RARE LUZON BIRDS

BY

RICHARD C. MCGREGOR

MANILA
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1905

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LETTER OF TRANSMITTAL.

DEPARTMENT OF THE INTERIOR,
BUREAU OF GOVERNMENT LABORATORIES,
OFFICE OF SUPERINTENDENT,
Manila, August 12, 1905.

SIR: I have the honor to transmit herewith a paper entitled "I. Birds from Mindoro and Small Adjacent Islands," and "II. Notes on Three Rare Luzon Birds," by Richard C. McGregor, collector of natural-history specimens, Bureau of Government Laboratories.

I am, very respectfully,

PAUL C. FREER,
Superintendent of Government Laboratories.

Hon. DEAN C. WORCESTER,
Secretary of the Interior, Manila, P. I.

I. BIRDS FROM MINDORO AND SMALL ADJACENT ISLANDS.

By Richard C. McGregor.

MINDORO.

In the present paper there will be found recorded the birds seen or collected along the Bacó River in the northern part of Mindoro during an expedition to that island covering March, April, and May, 1905. Our first station was but a short distance from the coast, at a locality known as Chicago. This point was selected in order to take advantage of a house which the owner, Mr. E. C. Hamill, of the North American Trading Company, kindly placed at our disposal. Here we secured the two specimens of *Chætura,* which I refer to a new species, and a specimen of the beautiful little cuckoo *Chalcococcyx xanthorhynchus.* At Chicago collecting was not satisfactory, and therefore I very soon made preparations to move well up the river. Natives were dispatched in advance to build a house (Pl. I) in the virgin forest as near as possible to the base of Mount Halcon (Pl. II). This, our second station, I shall refer to as Balete, assuming it to have been at least in the vicinity of the camp of that name occupied by Bourns and Worcester in 1891. Balete is a much more satisfactory locality than Chicago, as the forest is extensive, fairly free from underbrush, and is traversed by numerous trails.

No startling discoveries were made in this locality, but good series of the species peculiar to Mindoro were obtained and several species were added to the known avifauna of this island; among the latter was an *Edoliisoma* which appears to be undescribed.

We found it impossible to make a station on the mountain, as not enough of the wild hill people of Mindoro, known as the Mangyanes, could be found to carry even a third of our outfit.

To Dr. C. W. Richmond for copied lists of Mindoro birds, to Mr. E. C. Hamill for the use of his house at Chicago, and to my friend, Governor R. S. Offley, for assistance and many personal favors, I herewith express my sincere thanks and appreciation.

NOTES ON THE SPECIES OBSERVED.

Megapodius cumingi Dillw.

Two specimens of the "tabon" were collected at Balete. The species seems to be rare in Mindoro, as we were unable to secure a specimen on our previous trip, either at Calapan or Puerto Galera.

Gallus gallus (Linn.).

Very abundant in the vicinity of Balete. A chick in the down was taken May 25, but was dead on the next day. We have never been able to keep these wild chicks alive for more than one or two days.

Turnix fasciata (Temm.).

This species was collected by us at Calapan in December, 1902. A nest found at Chicago March 23, 1905, and believed to belong to this species, was situated on the ground in an old clearing, where it was well hidden by the surrounding grass. A bird was flushed from it, but could not be identified with certainty. The nest was composed of dry grass and was spherical in shape with an opening on one side. The three slightly incubated eggs measure 0.99 by 0.79, 0.99 by 0.79, and 0.97 by 0.78. It will be noticed that two of the eggs are of the same size, while the third is but a trifle smaller. Ground color white, closely speckled with dull greenish-brown and occasional small spots of various shades of lilac; the larger end rather thickly marked with blotches of blackish-brown.

Osmotreron axillaris (Bp.).

Several specimens from Balete.

Osmotreron vernans (Linn.).

Apparently less common than the preceding species; a male was collected at Chicago.

Phapitreron leucotis (Temm.). (Pl. III.)

Several nests of this dove were taken at Balete, and a photograph of one of these is reproduced. In the several specimens which we examined almost the sole material was twisted plant tendrils, which gave the nests the appearance of being made of spiral springs; they were invariably placed in small trees and rested on horizontal branches at 6 to 20 feet altitude. Eggs two, pure white.

Eggs and young were collected as follows:

April 8: One egg from oviduct of bird, 1.08 by 0.81.

April 27: Two eggs, incubation slight, 1.12 by 0.80 and 1.11 by 0.81.

May 2: Two eggs, incubation slight, 1.05 by 0.77 and 1.06 by 0.80.

May 5: Two young birds.

May 6: Two eggs, incubation slight, 1.15 by 0.81 and 1.10 by 0.78.

Leucotreron occipitalis Bp.

Several specimens of this dove in full plumage were obtained in the heavy forest near Balete.

Muscadivora[1] **ænea** (Linn.).

This fruit pigeon was not uncommon at various points along the river. Great numbers spent each night in two large balete trees near our camp, coming shortly before sundown and filling their crops with balete fruits before settling to rest for the night. Grant[2] gives the name of the Mindoro variety as *Carpophaga chalybura* Bp., and this may be correct, but as I have not worked out the varieties of this species I prefer to refer them all to *ænea* for the present.

Ptilocolpa carola Bp.

Numerous specimens which were examined do not differ from the ones taken in Luzon, but one male agrees with the Sibuyan males in having the gray patch on the fore-breast much darker than is usual with the Luzon skins. In specimens from Sibuyan we find what is perhaps a tendency toward the Negros bird described by Whitehead as *P. nigrorum,* in which the fore-breast is black. It would be interesting to compare birds from Negros, Sibuyan, and Luzon.

Zonophaps poliocephala (Hartl.).

This species was found only in the highest trees and usually in the deep forest; it was never observed associated in numbers. Several skins from Mindoro do not differ from those of our series taken in Sibuyan.

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[1] *Carpophaga* Selby (1835) is preoccupied by *Carpophaga* Billberg (1828) for a genus of cuckoos. The next available name is *Muscadivora* Schlegel. Teste Mearns, *Proc. Biol. Soc. Wash.*, XVIII, p. 84, 1905.

[2] *Ibis*, 1896, p. 477.

Myristicivora bicolor (Scop.).

One specimen of the "camasu" from Chicago.

Columba griseigularis (Wald. and Lay.).

Two specimens of the gray-throated pigeon were collected.

Macropygia tenuirostris Bp.

The slender-billed dove was not common.

Streptopelia dussumieri (Temm.).

One or two pairs of Dussumier's dove were observed in the river bottom at Balete.

Chalcophaps indica (Linn.).

One specimen of the Indian bronze-winged dove was killed at Chicago.

Phlogœnas platenæ Hartert. (Pls. IV, V, VI.)

This fine, blood-breasted dove was not obtained by us during our previous trip to Mindoro when we worked only on the coast at Puerto Galera and Calapan. One or two individuals were observed at Chicago, but it was not until we reached Balete that the species was found in abundance, although owing to its habit of feeding on the ground and flying at the slightest noise, it might easily be overlooked. The species is very distinct from its Luzon relative; the red breast-spot is very small, the wing coverts are marked with white in place of gray, and the upper parts are differently colored.

Two nests of this species were obtained at Balete. The first was taken April 28, and was situated on a horizontal limb of a small tree 5 feet from the ground. The two eggs were advanced in incubation. They measure 1.18 by 0.88 inches and 1.14 by 0.88 inches. The second was similarly placed in a shrub. The nest which was photographed (Pl. VI) measures 8 by 11 inches across the top and is very shallow, the outside depth being about 2 inches. On the bottom are a number of rather large leaves and sticks, topped by fine rootlets and spiral plant tendrils. The materials were poorly put together so that a large part of the bottom fell off when the nest was removed from its site. The two eggs were well incubated. They measure 1.14 by 0.86 inches and 1.18 by 0.85 inches. Their color is light cream.

Hypotænidia striata (Linn.).

One specimen from Balete.

Hypotænidia torquata (Linn.). (Pl. VII.)

One specimen from Balete has the tip of the bill twisted to the left as shown in the plate.

Rallina euryzonoides (Lafr.).

One specimen of this small rail was killed at Balete.

Limnobænus fuscus (Linn.).

A female was taken at Balete May 3.

Amaurornis olivacea (Meyen).

A nest of this species, found at Balete, was well hidden in a clump of saw grass. It was very neatly made of dry grass and had a deep cup. The single egg was heavily incubated when taken on May 20. It measures 1.64 by 1.22. The ground color is pale creamy white. Small spots and fine dots of reddish brown are scattered over the whole shell, but more numerously on the larger end, where there are also two large blotches of lavender. A few small lavender dots are scattered over the entire surface.

Amaurornis phœnicura (Forster).

One specimen from Balete.

Ochthodromus geoffroyi (Wagler).

One specimen was killed on the sea beach at the mouth of the river.

Ægialitis dubia (Scop.).

This little plover was abundant along the river in the vicinity of Balete, where it nested on the extensive gravel flats exposed by low water. A nest found April 24 was a slight hollow, lined with a mosaic of small pebbles. The three eggs measure 1.20 by 0.86, 1.14 by 0.86, and 1.22 by 0.86. Their ground color is very pale gray, almost white, carrying a considerable number of small lilac-colored spots. Small spots and irregular-shaped markings of dark brown are scattered over the entire surface, but are more numerous on the larger end. If one looks into the drill hole of one of these eggs while it is being held toward a good light the shell appears to be bright sea green.

Glottis nebularius (Gunn.).

A male was killed at Balete May 3, 1905.

Actitis hypoleucos (Linn.).

Tringoides hypoleucus Sharpe, Hand-list, I, p. 161.

Observed in many places along the river.

Gallinago megala Swinh.

One specimen of Swinhoe's snipe was taken at Balete on April 27, 1905.

Dissöura episcopus (Bodd.).

During our first visit to Calapan in December, 1902, this adjutant was abundant in the rice fields back of town, and although I attempted to secure specimens, my No. 5 shot seemed to have no effect whatever. At Balete we killed two along the margins of the river, where they were found searching for food. This bird is the most deliberate in its movements of any I have ever seen. It takes flight with ease, either from the ground or from a perch on a high tree. So slow is the motion of the wings that it would seem almost impossible for the bird to maintain itself in the air. In this species, the under side of the fore arm is bare and decorated with a wide line of dark crimson.

After having examined two specimens of this species, I am certain that the bird we saw in Calayan was *Dissöura episcopus,* although at the time I was obliged to record it from that island with doubt.[1]

Nycticorax manillensis Vig.

Two female night herons in adult plumage do not agree with the description of *N. mallinensis* as given in the Catalogue of Birds. The most obvious discrepancy is in regard to the nuchal plumes and the line over eye. Sharpe[2] says: "Crown of head and crest feathers, including the long nuchal plumes, greenish black, extending down the hind neck on to the mantle; no white eyebrow." Tweeddale[3] says of a male taken in Leyte: "The lengthened occipital plumes are black throughout their length and not only at their tips, as described by Vigors and figured by Fraser."

In an adult female (Chicago, Mindoro, March 21, 1905) the occipital plumes are nearly 7 inches in length and are white, with the tips and shafts blackish brown with a line of brown along each side of the basal third of the shaft. Likewise there is a very evident "eyebrow," a narrow line of white mixed with cinnamon, which extends from the base of the bill, over the eye nearly to the hind border. The crown and crest feathers are blue black, not "greenish black." Another female from the same locality, collected

[1] *Bull. Philippine Mus.*, No. 4, p. 11.
[2] *Cat. Bds.*, XXVI, p. 162.
[3] *P. Z. S.*, 1878, p. 345.

by Dean C. Worcester, February 19, 1905, does not differ from the above except in having the occipital plumes one-half as long.

Butorides javanica (Horsf.). (Pl. VIII.)

Three nests of this species were found near Balete. Two of these each contained two young, and the third held a single blue egg measuring 1.48 by 1.06. Each consisted of a very small mass of twigs and was placed on the roots of a fallen tree in midstream. The nests were examined during the latter part of April. A heron collected in Mindoro by Everett is listed as *Butorides javanica amurensis* (Schrenck).[1]

Bubulcus coromandus (Bodd.).

A few individuals observed along the lower river.

Ardetta cinnamomea (Gmel.).

One example of the chestnut bittern was seen near Balete.

Anas luzonica Fraser.

The Luzon mallard was not uncommon on the lower river, and an occasional pair was seen as far up as Balete. During this trip no other species of duck was seen.

Anhinga melanogaster (Pennant).

Plotus melanogaster SHARPE, Hand-list, I, p. 236.

Three specimens of the black-breasted darter were preserved.

Haliastur intermedius Gurney.

Abundant.

Pernis ptilonorhynchus (Temm.).

Dean C. Worcester killed a nesting female at Chicago, February 19, 1905, and a male was secured by our party at the same place in March.

Microhierax erythrogenys (Vig.).

One specimen from the vicinity of Chicago.

Polioaëtus ichthyaëtus (Horsf.) ?

Birds supposed to be of this species were seen along the river on several occasions.

Ninox mindorensis Grant.

Two male specimens of the Mindoro hawk-owl from Balete are

[1] Hartert, *Novit. Zool.*, II, p. 488.

similar to a male from Puerto Galera, the latter being recorded in another paper.[1]

Cacatua hæmaturopygia (P. L. S. Müller).

At least one pair of cockatoos had a nest in the hollow limb of an immense tree near Balete.

Prioniturus mindorensis Steere.

Very abundant in the forests about Balete.

Tanygnathus luconensis (Linn.).

Equally abundant with the last species.

Loriculus mindorensis Steere.

Not abundant, but a few individuals usually seen in suitable flower or fruit trees.

Eurystomus orientalis (Linn.).

The broad-billed roller was noted at both of our camps.

Pelargopsis gouldi Sharpe. (Pl. IX.)

On April 18 a nest of this kingfisher was discovered in a deserted termites' nest which was built approximately 30 feet from the ground, in a small dead stub. It was probably excavated by the birds, as there is no other way in which the hole could have been made. Two of the eggs are oval and nearly equal at each extremity; the third is blunt pointed at one end. In color they are glossy white and measure 1.49 by 1.09, 1.58 by 1.14, and 1.56 by 1.14. Incubation was far advanced.

A few sharp raps on the decaying tree caused the incubating bird to leave. A kingfisher, presumably one of the owners of the nest, lit in a tree standing nearby while we were taking the eggs, but when he discovered us left with a startled squawk.

Hume[2] records a nest of *Pelargopsis burmanica* which was made of grass roots placed in the fork of a bamboo, and also a nest of *Halcyon smyrnensis* is described as "a mass of moss, of a large oval in shape, wedged into a hollow between two stones, covered at the top with another, and supported underneath by a projecting root."

Alcedo bengalensis Briss.

Alcedo ispida Sharpe, Hand-list, II, p. 50 (pt.).

Abundant.

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[1] *Bull. Philippine Mus.*, No. 4, p. 17.

[2] *Nests and Eggs of Indian Birds*, 2d. ed., III, pp. 12 and 17.

Ceyx cyanopectus (Lafres.). (Pl. X.)

Grant,[1] in his report on Whitehead's collection from Isabela Province, Luzon, gave the history of *Ceyx cyanopectus* and *Ceyx philippinensis* at length and on the evidence of specimens collected by Whitehead he revived the latter name for the form which is without the blue pectoral band.

Whitehead[2] himself considered them male and female of one species. Bourns and Worcester,[3] who made a large collection of the small river kingfishers, did not agree with Grant's view.

I have before me fourteen specimens of *Ceyx cyanopectus* collected in Mindoro during the breeding season between the dates March 23 and May 18. In nearly all of these individuals the sexual organs were so greatly enlarged that a mistake in sexing was wellnigh impossible. Each of these fourteen specimens was sexed by one of my assistants, his mark verified by myself, and the sex again marked on the back of the tag—not in a book. Seven of these skins are marked males and have a blue band across the fore breast. Seven are marked females and lack the blue band across the breast. Seven others from Luzon, Masbate, Ticao, and Sibuyan confirm the conclusion that these two forms are male and female of one species.

Halcyon coromandus (Latham).

One specimen of the Coromandel kingfisher from Balete.

Halcyon gularis (Kuhl). (Pl. XI.)

The white-chinned kingfisher was seldom seen near our Balete camp because we were there during the nesting season, but by a careful search along the smaller streams we soon discovered birds of this species in abundance. A sand or clay bank, even if but a foot or two high, was usually burrowed, although the hole was not always occupied. Another favorite site was the earth held between the roots of a large, fallen tree. Many trees of this sort lay in midstream, and I imagine that the birds were glad to place their nests therein, as the water certainly afforded some protection from snakes, ants, and the other natural enemies of eggs and nestlings. One burrow was in the earth between two large roots of a standing tree and another in the end of a dead limb of a fallen one. The usual burrow had an entrance from 2.75 to 3 inches in diameter

[1] *Ibis*, Jan., 1895, pp. 112–115.
[2] *Ibis*, Oct., 1895, p. 102.
[3] *Ibis*, 1895, p. 404.

and was 12 to 20 inches long. The nest chamber, as is usual with the kingfishers, was enlarged and more or less flask shaped. No nesting material was used, unless a few pieces of dead insects and the bones of lizards can be regarded as such. However, these remains were the exception rather than the rule. The eggs are pure, glossy white in color and of the shape typical for kingfishers. It is usual to find three eggs, although occasionally four are seen. Three sets yield the following measurements:

Set *a,* April 15; burrow in earth held between roots of large fallen tree; incubation advanced; 1.28 by 1.09, 1.31 by 1.12, 1.31 by 1.08, and 1.27 by 1.08.

Set *m,* April 22, burrow in sandy bank; fresh; 1.27 by 1.06, 1.23 by 1.09, and 1.27 by 1.10.

Set *r,* April 25, burrow in clay bank; incubation slight; 1.23 by 1.08, 1.23 by 1.08, and 1.24 by 1.10.

Halcyon chloris (Bodd.).

The white-collared kingfisher was seen at Chicago, but was not noted at the Balete camp.

Penelopides mindorensis Steere.

The Mindoro hornbill was common along the lower river and several individuals fed on the fruit of a tree standing within a few feet of the Chicago house. Numerous birds were seen at Balete, but nothing in regard to the nesting habits was observed.

Merops americanus P. L. S. Müller.

Merops americanus P. L. S. Müller, Syst. Nat. Suppl., p. 95 (1776), teste Sharpe.

Merops bicolor Bodd., Tabl. Pl. Enl., p. 15 (1783), *ex* Sharpe, Cat. Bds., XVII, p. 60; Hand-list, II, p. 73.

Dr. Richmond has called my attention to the necessary change in the name of the Philippine bee-bird which is indicated above. Specimens were obtained at Chicago.

Lyncornis macrotis (Vigors).

Seven specimens of *Lyncornis* were collected at Balete, all of them killed within 100 yards of our camp. The birds flew during the night and morning, passing from the forest on one side of the river to that on the other.

Caprimulgus griseatus Wald.

Not uncommon along the river at Balete, where three specimens were obtained. Two of these are males in the gray plumage, with scarcely a trace of fulvous beyond that on the wings; the under

tail coverts are pure white. My description[1] of the female of this species needs modification. I stated that the fulvous spot on the inner web of the first primary does not reach the web; this was true of the specimen then in hand, but is not so in other skins.

Caprimulgus manillensis Wald.

Four specimens of the Manila goat-sucker from Balete do not differ from others taken in Luzon and Masbate.

Macropteryx major Hartert.

Macropteryx major HARTERT, Novit. Zool., II, p. 473 (1895), teste Sharpe, Hand-list, II, p. 89.

Macropteryx comata HARTERT, Cat. Bds. XVI, p. 517 (pt.).

Three specimens from Balete.

Collocalia whiteheadi Grant.

Collocalia fuciphaga (Thunb.).

Small swifts were exceedingly abundant along the river in the vicinity of our upper camp. The large feeding flocks comprised mainly *C. fuciphaga* and *C. whiteheadi* with only occasional individuals of *C. marginata* and *C. linchi*. The first two species mentioned are very similar and the presence or absence of tarsal plumes seems to be the most reliable criterion for their identification and should be noted while the birds are in the flesh, as the plumes are so small as to be very easily worn off by the string of the label.

Collocalia marginata Salvad.

One specimen of this small species was taken by us at Puerto Galera, Mindoro, in December, 1902; another was killed near Balete, May 11, 1905. The species seems to be rare in Mindoro and the few individuals seen were associated with *C. fuciphaga* and *whiteheadi*.

Collocalia linchi Horsf. and Moore.

A small flock of this species was discovered feeding over the river at the base of the mountains on May 5, and two specimens were killed. I believe this is the first time Linch's swift has been taken in Mindoro.

Chætura dubia new species. (Pl. XII.)

Type.—Adult male, No. 4717, Government Laboratories Collection; Mindoro, P. I., March 18, 1905; McGregor et aliæ.

[1] *Bull. Philippine Mus.*, No. 1, p. 6.

Description.—General color blackish brown; back and rump noticeably lighter, being light seal brown, each feather with a subterminal, more or less concealed area, or band, of bluish violet; head and body shot with bluish violet gloss, strongest on chin, throat, breast, and sides of head and neck; a large white patch on each side between nostril and antrose feathers in front of eye; crissum white, each feather blackish brown at its base, the longest feathers with edges also blackish brown except near tip;[1] extending diagonally upward and forward on each flank a wide white stripe connected with the white crissum behind as in *Chætura gigantea;* exposed edges of wing feathers black, inner webs of primaries largely light brown; inner webs of alula and primary and secondary coverts shot with greenish blue gloss, this gloss also on outer web of primaries where hidden by primary coverts; tertiaries greenish blue; lining of wing brown, each feather bordered with dirty white which has its greatest extent on the innermost feather; axillaries dark brown, shot with bluish violet gloss; exposed portion of tail blackish, the concealed basal portion glossed with green and blue. Bill black; iris brown; legs and feet reddish flesh; nails light brown. Length in flesh, 9 inches; wing (flat on rule), 8.67; tail (spines much worn), 2.52; bill from nostril, 0.29; tarsus, 0.71.

Cotype.—Adult female, No. 4718, Government Laboratories Collection; Mindoro, P. I., March 18, 1905; McGregor et aliæ. Length in flesh, 9.2 inches; wing, 8.57; tail (spines worn), 2.52; bill from nostril, 0.30; tarsus, 0.72.

The few words, without measurements, in Catalogue of Birds, XVI, p. 476, scarcely apply to the Mindoro species for Hartert says of *celebensis:* "In size similar to *C. gigantea,*" whereas *C. dubia* is decidedly larger than *gigantea;* Clarke's[2] measurements of the Negros specimen certainly agree much better with our bird, but neither of these writers makes any mention of white wing lining in *C. celebensis,* a character very noticeable in *C. dubia.*

This species was seen almost daily flying high over the clearing at Chicago and I also observed large swifts near Balete. The two specimens obtained by us were killed at the former locality.

Surniculus velutinus Sharpe.

Several specimens of this little black cuckoo were killed at Balete.

[1] In the female specimen before me the two longest undertail coverts have the shaft blackish brown to the tip.

[2] *Ibis,* 1894, p. 533.

Hierococcyx spaveroides (Vig.).

A male taken at Balete on May 5, 1905.

Cacomantis merulinus (Scop.).

Balete.

Chalcococcyx xanthorhynchus (Horsf.).

A male of this pretty little cuckoo was killed March 20, 1905, near Chicago.

Endynamis mindanensis (Linn.).

The Philippine koel is abundant in Mindoro.

Centropus mindorensis (Steere).

Centrococcyx mindorensis STEERE, List Bds. and Mams. Steere Exp., p. 12.

The Mindoro cuckoo was abundant in the localities visited by us, but was not often seen far from a thick tangle of brush or a bed of saw grass in which it could hide at the first sign of danger. It was merely by chance that I discovered a nest of this species, situated in the interior of a bed of saw grass and made fast to several stems. The nest, placed about 5 feet from the ground, was entirely composed of wide grass with a slight lining of bamboo leaves. It was very bulky, measuring 2 feet in height by 15 inches in the shortest diameter, and was not unlike a ricebird's nest greatly enlarged, having the top covered, and a small hole in one side. On April 8 there were two eggs in the nest, which were taken on April 12 as no more had been deposited. In color they are dull white, covered by a thin chalky layer which is of a pale, creamy white; their measurements are 1.08 by 0.86 and 0.96 by 0.83.

In the short description given by Steere the characters of this species are well described, but his statement "Wings slightly shaded with rufous, most apparent on edges of primaries" needs some modification. The "rufous" is not a constant character, and when present is confined to the edges of the alula and primary coverts, rarely present on the secondary coverts, and never on the primaries. This is not dependent upon sex, but it may be due to the age of the bird. These statements are based upon the examination of eleven adult specimens.

A young bird, No. 5109, Balete, May 18, 1905, has the upper parts similar to those of the adult, but duller; alula, primary coverts, and some secondary coverts, barred and mottled with light

cinnamon; lower parts dull blackish, a few feathers on the breast with whitish shaft lines.

Centropus steerii Bourns and Worcester.

Steere's cuckoo was quite as abundant as the last species. It was usually seen in the tops of vine-covered shrubs.

Centropus javanicus (Dumont).

Not uncommon in grass patches along the lower river.

Xantholæma hæmatocephalum (P. L. S. Müller).

The "took-took-took" of this barbet was often heard in the vicinity of both camps, and specimens were obtained.

Iyngipicus validirostris Blyth.

A few specimens of this little woodpecker were collected.

Thriponax mindorensis Steere.

A young female, culmen 1.70 inches, differs from the adult in having the abdomen and rump band pure white without any buff wash.

Pitta erythrogaster Temm.

Abundant.

Hirundo javanica Sparrm.

Several nests were seen attached to dead and fallen trees in the river.

Cyornis philippinensis Sharpe.

Rare.

Hypothymis occipitalis (Vig.). (Pl. XIII.)

Early in April a nest of the black-naped flycatcher was discovered saddled in the fork of a young tree standing in a piece of forest near the river. As the nest was but three feet from the ground it was an excellent subject for the camera. At one time the female was quite fearless of my approach and would still be on the nest when I left. I never saw the male incubating, nor did I observe him helping his mate in any way, unless his presence in a near-by thicket was of assistance to her. The nest measured 2.5 inches in outside diameter and 3.2 in outside depth; the base was much thickened so that the inside depth was but 1.2 inch. It was a dainty thing when new, resembling somewhat the nest built by an American gnatcatcher (*Polioptila*). The bulk of the material was green moss, soft bits of dry bamboo leaves, and fine blackish fibers, the latter being employed on the inside. The outside was

decorated with a white material resembling cobweb, but this was in reality the cotton-like substance which grows in large masses and streamers upon the back of a jumping insect, one of the *Fulgoridæ*. The three eggs were white, marked with dots of reddish brown, the dots more numerous at, and forming rings about, the larger ends of two of them, and about the smaller end of the third.

Zeocephus rufus (G. R. Gray).

A few specimens of the rufous flycatcher were taken at Balete.

Artamides mindorensis Steere. (Pl. XIV.)

A nest containing a single fresh egg was taken near Balete, April 26, 1905; these, together with a female *Artamides,* were collected by my assistant, who assures me that he saw the bird leave the nest. The nest is composed of mosses (*Pogonatum* and others), small leaves, lichens, and fine rootlets; the outside is covered with cobwebs which serve to hold the materials together and to fasten the nest to the fork in which it is built. The nest is 4.5 inches across the top and its outside depth is but two. The ground color of the egg is light gray, with a slight greenish tinge; a heavy and continuous wreath of spots and blotches encircles the shell near the plane of its short diameter; a few small spots are scattered about over the entire surface; the deep shell markings vary from pale to dark lavender; the surface spots and blotches are reddish brown; measurements, 1.21 by 0.83.

Edoliisoma elusum new species.

Type.—Adult male, No. 5102, Government Laboratories Collection; Balete, Rio Bacó, Mindoro, P. I., May 17, 1905; McGregor et aliæ.

Description.—General color bluish slate; chin, throat, forebreast, forehead, and side of head including lores and a wide line over eye, jet black; alula, primary coverts, and primaries black; inner primaries and inner feathers of alula narrowly edged with blue gray; secondaries and tertiaries black, with wide edges of blue gray, which covers all or nearly all of the outer web; secondary coverts gray; inner web of quills partly dark blue gray, this begins as a small basal area on the short first primary, becomes greater on each succeeding quill, and reaches nearly to the tips of inner quills; a narrow edging of white on inner web of first four quills (in the type this is not so pronounced as in the two other skins at hand); tail black; from below, outer pair of rectrices tipped with blue gray

(0.75 inch in length); on second pair, gray tip much less and only a trace on some of the other rectrices; central pair blue gray with a subterminal black area. Bill, legs, and nails black; irides, dark brown. Length in the flesh, 9.3 inches; bill from nostril, 0.62; culmen from base, 0.88; wing, 5.00; tail, 4.18; tarsus, 0.92.

Cotype.—Adult female, No. 5103, Government Laboratories Collection; Balete, Rio Bacó, Mindoro, May 17, 1905; McGregor et aliæ.

Description.—General color leaden gray (nearly the same color as *Artamides mindorensis* Steere), thus much lighter than the male; chin, throat, and head areas described as black in male, are gray in the female, uniform with rest of general color; lores, however, slightly blackish; wing and tail as in the male. Length in the flesh, 9.3 inches; bill from nostril, 0.61; culmen from base, 0.86; wing, 4.96; tail, 4.18; tarsus, 0.92.

Distribution.—Mindoro and Luzon, Philippines.

A male and female from Lamao, Bataan Province, Luzon, do not differ from the Mindoro specimens, of which we collected two of each sex.

This species differs from *E. mindanense* in having rump and upper tail coverts uniform in shade with the back, and from *E. panayense* in having no wing bar; it appears to be closely related to *E. everetti* of Sulu, Tawi-Tawi, and Bongao. Possibly this is the species referred to by Sharpe when he says:[1] "Lord Tweeddale also told me, shortly before his death, that he had yet another new species of *Edoliisoma* from Luzon."

Pericrocotus cinereus Lafres.

In March the ashy minivet was fairly common at Chicago.

Lalage melanoleuca (Blyth).

Abundant at Chicago, where a number of specimens were taken; it was not seen at our upper camp.

Iole mindorensis Steere.

The nest and eggs of the Mindoro bulbul have been described by Grant and Whitehead, but notes on two nests collected near Balete may be of interest. April 2, a set of three heavily incubated eggs was taken with the nest from a small tree. The ground color of these eggs is white, with faint lavender undershell markings; the entire surface is thickly and uniformly marked with

[1] *Cat. Bds.*, IV, p. 471.

elongated and twisted spots of reddish brown. The measurements are 1.03 by 0.72, 1.00 by 0.71, and 0.99 by 0.75.

The nest is composed of several leaves held in place by threads of a black hairlike fungus; cobweb and green moss are also present in small quantities; the lining consists of a quantity of long slender fibers; the cavity is 1.5 inches deep and 3 inches in diameter; the outside depth is 3.5 inches.

An incomplete set of two fresh eggs was taken April 9. These are colored very differently from the set of three; the ground color is light reddish brown, produced by very fine spots of that color; both the lavender under shell markings and the rich reddish brown spots are few and blotchy, the latter usually with a blackish brown center from which the lighter color seems to have been smeared out over the shell. The measurements are 1.06 by 0.75 and 0.98 by 0.72.

Pycnonotus goiavier (Scop.).

Several nests of this bulbul were observed; they were all situated in small bunches of "ta-lá-hib," or saw-grass, growing in the dry bed of the river.

Geocichla cinerea Bourns and Worcester. (Pl. XV.)

Geocichla cinerea Bourns and Worcester, Occ. Papers Minnesota Acad., I, No. 1, p. 23, 1894.

Three skins collected in the heavy forest at Balete are in all probability of this species. In the original description no mention is made of the white spot on the inner web of the two outer pairs of tail feathers. I also find in our specimens a much greater length of tarsus than is assigned to the type (0.98 inch). In one male specimen the under tail coverts are strongly washed with buff. Bill black, base of lower mandible whitish, legs and nails white; irides very dark brown.

Measurements of Geocichla cinerea.

Number.	Sex.	Date.	Length.	Wing.	Tail.	Exposed culmen.	Tarsus.
5113	♂	May 18	7.7	4.50	2.68	0.71	1.25
5114	♂	----do---	7.7	4.37	2.71	0.76	1.18
4960	♀	Apr. 26	7.9	4.40	2.54	0.72	1.20

Petrophila manilla (Bodd.).

This thrush has a peculiar habit of flitting about just at dusk; this sometimes leads to its being killed by mistake.

Locustella ochotensis (Midden.).

A specimen of Middendorf's warbler was killed May 17 within ten feet of our house at Balete.

Acrocephalus orientalis (Temm. and Schl.).

One specimen killed April 27.

Cisticola exilis (Vig. and Horsf.).

A few seen in grass patches along the river.

Megalurus ruficeps Tweed.

A specimen of the smaller Megalurus from Balete.

Acanthopneuste borealis (Blas.).

Rare.

Artamus leucorynchus (Linn.). (Pls. XVI, XVII, XVIII.)

Artamus leucogaster SHARPE, Hand-list, IV, p. 260.

This species was abundant near Balete, and during April was busily engaged in nesting or in feeding young. Several nests, each containing three young, were found during that month, indicating that if the collector wishes to find eggs the search should begin in March. Two nests which were examined, each contained four eggs; these are described below. The nest was always placed on the end of a stub or on the butt of a fallen tree in the river bed. The old birds are very pugnacious if their nest contains young, but if the eggs are not hatched, they are less energetic in their efforts to drive away the intruder.

April 22, 4 fresh eggs, measurements: 0.97 by 0.70, 0.96 by 0.70, 0.94 by 0.70, and 0.90 by 0.70; nest of small rootlets and one or two leaves compactly made and deeply cupped; placed on the butt of a partly burned and drifted tree in the river bed.

April 30, four heavily incubated eggs; measurements: 0.91 by 0.70, 0.91 by 0.70, 0.89 by 0.79, and 0.90 by 0.70; nest on the top of a stub five feet in height, in the river bed; it was composed of fine blackish-brown rootlets.

The two nests just described were not surrounded by water, but many of the others were placed on stubs or fallen trees in midstream as is the case with the one about to be described, of which an illustration is given (Pl. XVI).

April 15, three small young; nest 20 inches above water, on slanting stub; nest composed of weathered rootlets and a few straws, giving it a dark gray color, exactly like that of the stub; inside diameter, 3 by 4 inches; inside depth, 1.75 inches.

The eggs of this species are most easily and accurately described by saying that both in color and shape they are like those of the shrikes. They have a peculiarly faded or washed-out appearance which at once recalls to mind the eggs of *Lanius*. Authors [1] have called attention to this similarity, which is one of the reasons for placing the shrikes and swallow-shrikes near each other in the system. The ground color is dull white; the light lavender under shell markings are large and usually confluent around or over the larger end of the egg; other markings of light reddish brown are scattered about the same situation; both lavender and brown occur in small spots over the entire surface. The third egg in the set of April 30 has its wreath of color near the smaller end. One in each of the two sets differs from the others in having a light brownish ground color.

Otomela lucionensis (Linn.).

Rare.

Hyloterpe albiventris Grant.

One specimen of the white-bellied thick-head was taken near Balete.

Dicæum retrocinctum Gould.

Dicæum xanthopygium Tweed.

This and the last-named species were first found feeding in a flowering vine at Chicago, but very few specimens were obtained. A number of those we attempted to shoot were not killed and about half of those killed could not be found. At Balete we again encountered the two species; sometimes they were feeding in high flowering trees and again near the ground on the fruit of various fig trees. A fair series of each species was obtained. We have never seen either in cocoanut trees.

Dicæum pigmæum (Kittlitz).

A few specimens taken, but the species was not common.

Prionochilus inexpectatus Hartert.

Several specimens killed in fig trees.

Æthopyga flavipectus Grant.

One male and two females are all we were able to secure of this handsome little sunbird. The male agrees with several from Mariveles, Luzon, in having the breast darker yellow than Lubang specimens (*Æ. rubrinota*).

[1] Whitehead, *Ibis*, 1899, p. 240; Baker, *Ibis*, 1901, p. 420.

Cinnyris sperata (Linn.).

The red sunbird was obtained at Chicago, but was by no means abundant.

Cinnyris jugularis (Linn.).

A male black-throated sunbird made daily visits to an ornamental flowering shrub within 2 feet of the porch at Chicago. The species was not noted at our upper camp.

Anthreptes griseigularis Tweed?.

So far as I know, no species of *Anthreptes* has been recorded from Mindoro. The present collection contains two adult females and one male; the latter, unfortunately, is immature, with but a few metallic feathers on head, mustachial line, and upper tail coverts and with no feathers of the adult plumage on the throat, so that no absolute determination can be made. The two females agree very well in size and coloration with those of *A. griseigularis* from Luzon. The Mindoro bird can not be *A. chlorigaster,* which is much larger and has a longer bill.

Motacilla melanope Pall.

Four males, May 4 to 10, are in full breeding dress, the entire throat being black with narrow gray edges to the feathers. This is the first time we have found this bird in full plumage.

Chlorura brunneiventris Grant.

On April 29 a pair of this species were killed in the river bottom within 100 yards of our Balete camp. No more were seen.

Munia jagori Martens.

Jagor's chestnut weaver-bird was seen in small companies in the high grass of the river bottom, but was by no means common. Probably the species was breeding, but I saw no nests.

Oriolus chinensis Linn.

Abundant.

Dicrurus balicassius (Linn.).

Not uncommon in the forests about Balete.

Sarcops calvus (Linn.).

Common.

Lamprocorax panayensis (Scop.).

Calornis panayensis SHARPE, Cat. Bds., XIII, p. 147.

Common.

Corvus pusillus Tweed.

Corone philippina Bp.

Both species of crow are very abundant in Mindoro.

BIRDS FROM SMALL ISLANDS ADJACENT TO MINDORO.

The species recorded in the following lists were noted by Dean C. Worcester and the writer during a few hours on Maestre de Campo, Semerara, and Sibay. All three of the islands are near Mindoro and are within the 100-fathom line, which extends outward from the eastern and southern coast of the larger island so as to include these smaller ones.

A second list of birds from Semerara is also introduced, giving the observations made by Dean C. Worcester on a subsequent visit to that locality.

MAESTRE DE CAMPO.

Maestre de Campo lies directly to the east of Mindoro; its surface is elevated and broken; some of the summits, which we had not time to visit, are crowned with small patches of forest. None of the species observed are of importance, with the possible exception of a *Centropus,* of which no specimen was taken.

LIST OF BIRDS NOTED ON MAESTRE DE CAMPO NOVEMBER 8, 1904.

Streptopelia dussumeri (Temm.).
Haliastur intermedius Gurney.
Tanygnathus luconensis (Linn.).
Eurystomus orientalis (Linn.).
Halcyon gularis (Kuhl).
Halcyon chloris (Bodd.).
Endynamis sp.
Centropus sp.
Hirundo gutturalis Scop.
Hypothymis occipitalis Vig.
Acanthopneuste borealis (Blas.).
Otomela lucionensis (Linn.).
Dicaeum (Kittlitz).
Cinnyris jugularis (Linn.).
Motacilla melanope Pallas.
Anthus rufulus Vieill.
Anthus gustavi Swinh.
Oriolus chinensis Linn.
Sarcops calvus (Linn.).
Corone philippina Bp.

SEMERARA.

Semerara lies to the southward of Mindoro and has no high elevations; however, the summits of the hills bear small patches of trees. A large part of this island is covered with grass. A species of fruit thrush was observed here, but none of the birds were killed.

Worcester visited the island again on July 24, 1905, and collected specimens of the *Iole* which proves to be the Mindoro species;

he also secured specimens of two other species of interest. One of these is a cuckoo which is identical with *Centropus steerii* of Mindoro, the other is a distinct variety of *Chibia,* which I take pleasure in naming after its discoverer.

The presence of *Centropus mindorensis* and *Iole mindorensis* is very decided evidence in favor of uniting Semerara with Mindoro. The discovery of a *Chibia* in this island suggests that Semerara may have been one of the stepping-stones by which the genus reached Tablas from the Cuyos or from the Calamianes.

LIST OF BIRDS NOTED ON SEMERARA NOVEMBER 12, 1904.

Gallinago sp.
Haliaëtus leucogaster (Gmel.).
Halcyon chloris (Bodd.).
Endynamis mindanensis (Linn.).
Iole sp. (See following list.)
Cisticola exilis (Vig. and Horsf.).
Anthus rufulus (Vieill.).
Oriolus chinensis Linn.

A SECOND LIST OF BIRDS FROM SEMERARA, NOTED BY DEAN C. WORCESTER, JULY 24, 1905.

Chibia worcesteri new species.

Type.—Adult male, No. 10508, Government Laboratories Collection; Semerara Island, Mindoro Province, Philippines; July 24, 1905; Dean C. Worcester.

Specific characters.—Closely related to *Chibia cuyensis* McGregor, but wing longer and outer tail feather much more recurved; similar to *Chibia palawanensis* Tweeddale, but tail longer and its outer feather more recurved, bill longer and deeper.

Description of type.—Entire plumage black, with dark bluish gloss on head and on tips of breast and neck feathers; wings and tail glossed with dark green; back, dull black without any gloss. "Eyes dark brown; bill, legs, and feet black; length, 11.5 inches." Wing, 5.90 inches; tail, 5.40; middle rectrices, 4.74; bill from nostril, 0.82; culmen, 1.20; depth of bill at angle of gonys, 0.42.

I have placed this species in the genus *Chibia* because of its general coloration and its much recurved outer tail feather. Possibly it belongs in *Dicrurus,* but with the material at hand I can not come to this conclusion unless *Chibia* be united to *Dicrurus.*[1]

[1] Dubois, *Syn. Av.*, p. 529, unites both *Chibia* and *Buchanga* with *Dicrurus,* a proceeding which gives satisfactory results when applied to the Philippine species of those genera.

Osmotreron axillaris (Bp.).
Leucotreron leclancheri (Bp.).
One female specimen.
Carpophaga aenea (Linn.).
Streptopelia dussumieri (Temm.).
Demiegretta sacra (Gmel.).
Butorides javanica (Horsf.).
Merops americanus P. L. S. Müller.
Endynamis mindanensis (Linn.).
Centropus mindorensis (Steere).
Two specimens of *Centropus* from Semerara do not differ from the Mindoro bird, *C. mindorensis*.
Centropus javanicus (Dumont).
[One specimen killed.—D. C. W.]
Pitta atricapilla Less.
[Abundant.—D. C. W.]
Hirundo gutturalis Scop.
Cyornis philippinensis Sharpe.
Lalage melanoleuca (Blyth).?
[A bird, probably of this species, was seen.—D. C. W.]
Iole mindorensis Steere.
Two specimens in molt. These do not differ from typical Mindoro skins.
Copsychus mindanensis (Gmel.).?
Cisticola exilis (Vig. and Horsf.).
Artamus leucorynchus (Linn.).
Dicæum pygmæum Kittlitz.
Cinnyris jugularis (Linn.).
Anthus rufulus Vieill.
Munia jagori Martens.
Oriolus chinensis Linn.
Sarcops calvus (Linn.).
Lamprocorax panayensis (Scop.).
Corone philippina Bp.

SIBAY.

Sibay lies to the southward of Semerara, is low and nearly level, and has no trees except a fringe of small growth just above the beach. No birds of interest were seen on Sibay.

LIST OF BIRDS NOTED ON SIBAY NOVEMBER 12, 1904.

Myristicivora bicolor (Scop.).
Streptopelia dussumieri (Temm.).
Charadrius dominicus (P. L. S. Müll.).
Actitis hypoleucos (Linn.).
Circus melanoleucus (Forster).
Butastur indicus (Gmel.).
Halcyon chloris (Bod.).
Hirundo gutturalis Scop.
Lalage niger (Forster).
Petrophila manila (Bodd.).
Cisticola exilis (Vig. and Horsf.).
Artamus leucorynchus (Linn.).
Otomela lucionensis (Linn.).
Cinnyris jugularis (Linn.).
Motacilla melanope Pallas.
Munia jagori Martens.
Oriolus chinensis Linn.
Sarcops calvus (Linn.).
Corone philippina Bp.

II. NOTES ON THREE RARE LUZON BIRDS.

By Richard C. McGregor.

Antigone sharpei Blanf.

Antigone sharpei McGregor, Bull. Philippine Mus., No. 4, p. 11 (Aparri and Candaba Swamp, Luzon).

Although this species has been recorded from Luzon, the record was based upon a mounted specimen and a bird in confinement. Therefore it is not superfluous to note that Mr. Worcester observed five individuals of the species in the Cagayan Valley, northern Luzon, in January, 1905.

Botaurus stellaris (Linn.).

Botaurus stellaris Sharpe, Cat. Bds., XXVI, p. 253: Hand-list I, p. 204 (Temperate Palaearctic Region, N. W. India, Burma).

A specimen of the bittern has been added to the Laboratories collection through the kindness of Major Babbitt, who killed the bird at Laguna, on the Laguna de Bay, Luzon, March 12, 1905. The specimen was received in the flesh during my absence from Manila and the sex was not determined. I believe this species has not previously been recorded from the Philippines.

Zosterornis nigrocapitatus (Steere).

Mixornis nigrocapitatus Steere, List Bds. and Mams. Steere Exp., p. 17 (Samar, Leyte).

Zosterornis nigrocapitatus Grant, Ibis, 1897, pp. 232 and 234; Sharpe, Hand-list, IV, p. 51.

A single male specimen of a *Zosterornis* from Bataan Province, Luzon, is provisionally referred to the above species, but there is little doubt that it will be found to represent a distinct one when compared with typical specimens. The specimen was collected December 3, 1904, in the forest on the Mariveles Mountains. This makes the fourth species of the genus known from Luzon, Grant having described three (*Z. striatus, Z. whiteheadi,* and *Z. dennistouni*) from the collections obtained by Whitehead in the northern part of the Island.

LIST OF ILLUSTRATIONS.

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II. Mount Halcon from Camp Balete.
III. Nest of Phapitreron leucotis.
IV, V. Phlogœnas luzonica and P. platenæ.
VI. Nest of Phlogœnas platenæ.
VII. Abnormal bill of Hypotænidia torquata.
VIII. Nesting site of Butorides javanica.
IX. Nest of Pelargopsis gouldi.
X. Ceyx cyanopectus.
XI. Nesting site of Halcyon gularis.
XII. Chætura gigantea and C. dubia.
XIII. Nest of Hypothymis occipitalis.
XIV. Nest of Artamides mindorensis.
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XVI. Nest and young of Artamus leucorynchus.
XVII. Nesting site of Artamus leucorynchus.
XVIII. Nest and young of Artamus leucorynchus.

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PLATE II. MOUNT HALCON FROM CAMP BALETE. (FROM PHOTOGRAPH TAKEN JUST AFTER SUNSET.)

PLATE III. TYPICAL NEST OF PHAPITRERON LEUCOTIS.

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PLATE V. (1) PHLOGŒNAS LUZONICA; (2) PHLOGŒNAS PLATENÆ.

Plate VI. NEST OF PHLOGŒNAS PLATENÆ.

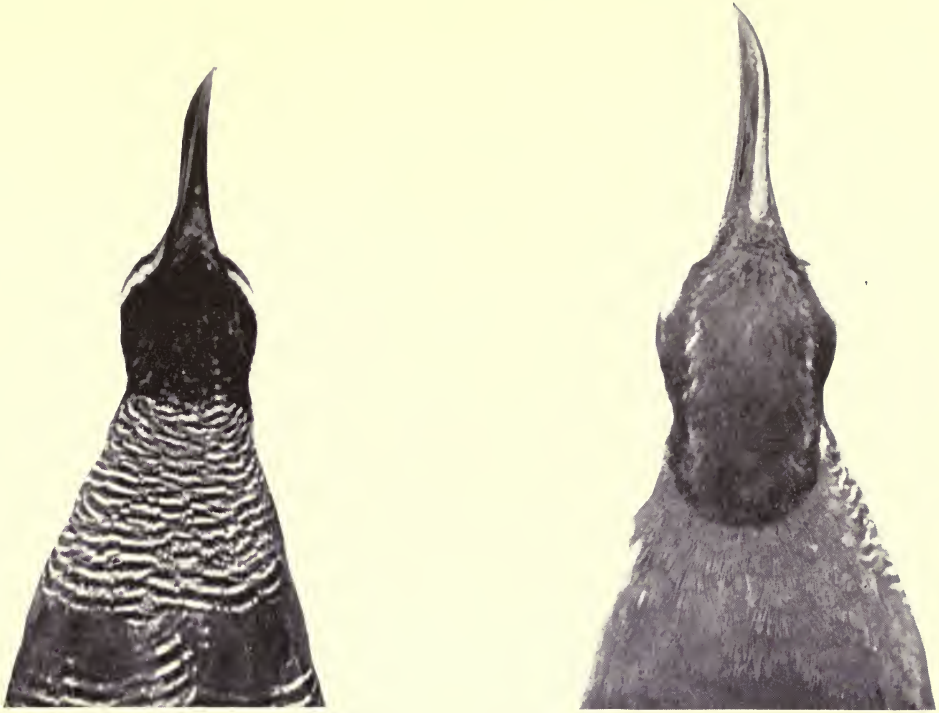

PLATE VII. ABNORMAL BILL OF HYPOTÆNIDIA TORQUATA.

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PLATE IX. NESTING SITE OF PELARGOPSIS GOULDI.

PLATE X. CEYX CYANOPECTUS, MALE AND FEMALE.

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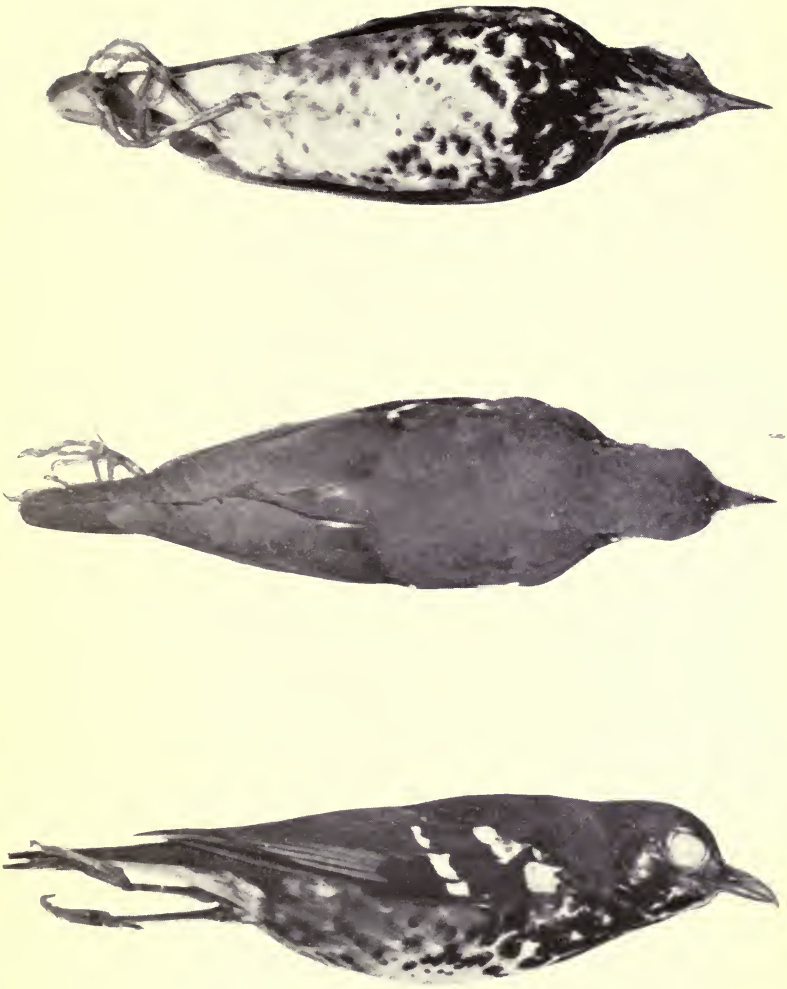

PLATE XV. GEOCICHLA CINEREA.

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PLATE XVIII. NEST WITH YOUNG OF ARTAMUS LEUCORYNCHUS FROM THE SITE SHOWN ON PLATE XVII.

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